Remarks

Applicant and the undersigned would like to thank the Examiner for his efforts in the examination of this application. Reconsideration is respectfully requested.

I. Designation of Claims

The Examiner has pointed out that Claims 8, 9, 11-19, and 25-28 were listed as "withdrawn" when previously they were canceled.

These claims have been redesignated as "canceled" in the new claim set above.

II. Rejection of Claims 1, 2, 4, 5, 7, 10, and 29 under 35 USC 102(b)

The Examiner has rejected Claims 1, 2, 4, 5, 7, 10, and 29 under 35 USC 102(b) as being anticipated by Haupt (U.S. Patent No. 4,344,320).

Independent Claims 1 and 29 have been amended to more particularly point out that which Applicants regard as their invention. Specifically, the at least one cavity has been recited as being a permeable cavity. Further, the impedance is recited as being "sufficiently high to create a pressure differential between said at least one permeable cavity and said source resulting from a minuscule flow of said first fluid therethrough due to permeation of said first fluid through said at least one permeable cavity". A further step has been added that comprises "allowing said pressure differential to stabilize to form a steady state pressure differential between said source and said at least one permeable cavity."

Claims 1 and 29 are believed to patentably define over Haupt, who teaches cavities having no inherent permeability. It is believed that these cavities can either fail as a result of

cracking or remain completely sealed. Any permeability whatsoever in the cavities of Haupt (i.e., the piping system 4) is indicative of the failure in the insulating layer. See in particular column 4, lines 61 and 62, which reads: "In normal cases, the piping system is sealed everywhere so that flow losses do not occur. The differential pressure DP at the throttle is then zero".

Haupt does describe a system where there is a steady flow of fluid through the piping system; however this is produced by the throttle 11, which is in fluid communication with the piping system 4. The purpose of allowing a steady flow of fluid through the throttle 11 is to provide means for determining whether or not there is a blockage in the piping system 4. This is described in Haupt at column 5 lines 3-13. However, this steady state flow is clearly and unequivocally not a result of a flow through the "cavities" per se of Haupt (i.e., the piping system disposed within the insulating layer) but rather as mentioned above, via a throttle coupled to the piping system outside of the vessel being monitored.

The present invention recites a minuscule flow of fluid permeating through the cavities to produce the pressure differential. Further, the invention as recited includes a step of allowing the pressure differential to stabilize to form a steady state pressure differential. Once the steady state pressure differential has been obtained, the claims recite a monitoring for a change in the steady state pressure differential. Any such change is indicative of an imminent failure of the structure in the area of the cavity.

It is submitted that nowhere is it suggested that the Haupt invention can be applied to cavities which are inherently permeable, nor does Haupt disclose a step of allowing a pressure differential that arises due to permeation of fluid through the cavity to stabilize.

Accordingly, Haupt does not anticipate independent Claims 1 and 29, as Haupt neither discloses nor suggests every feature of amended Claims 1 and 29. Accordingly, Claims 1 and 29, and Claims 2, 4, 5, 7, and 10 dependent therefrom, are believed to be clearly novel over Haupt.

III. Rejection of Claim 6 under 35 USC 103(a)

The Examiner has rejected Claim 6 under 35 USC 103(a) as being unpatentable over Haupt '320 in view of Schulte (U.S. Patent No. 5,390,533).

As Claim 6 is indirectly dependent from Claim 1, believed patentable, Claim 6 is also believed patentable over the cited art.

Conclusions

Applicant respectfully submits that the above amendments place this application in a condition for allowance, and passage to issue is respectfully solicited. The Applicant and the undersigned would like to again thank the Examiner for his efforts in the examination of this application and for reconsideration of the claims as amended in light of the arguments presented. If the further prosecution of the application can be facilitated through telephone interview between the Examiner and the undersigned, the Examiner is requested to telephone the undersigned at the Examiner's convenience.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that the foregoing is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, this 14TH day of November, 2003.

Edward Bradley